outlined above with respect to the extraction of audio/video/subtitle information from VOB files.

Building an Object Model of a BD-J BD-ROM

[0116] The process for building an object model of title with a BD-J object associated with it is similar to the process outlined above with the exception that the content authoring system parses the BD-J object to identify standard objects and translates navigation instructions within the BD-J Java Xlet. In many embodiments, the content authoring system has access to the original source code for the Java Xlet and can construct an object model from the source code. When the original source code is not available, the content authoring system can parse the bytecode of the Java Xlet. In a number of embodiments, standard object libraries are used in the authoring of BD-J Java Xlets and the content authoring system is configured to identify the standard objects in building the object model. Once the object model has been constructed, the object model can be utilized to generate an HTML5 page or a set of HTML5 pages for each BD-J object and an associated JavaScript file that captures the navigation information contained within the BD-J Java Xlet. In addition, audio/video/subtitle information in the clips associated with each BD-J can be extracted, transcoded (optional) and inserted into one or more container files in a manner similar to that outlined above with respect to the extraction of audio/video/subtitle information from VOB files.

[0117] Using processes similar to those described above with respect to interactive multimedia content authored in accordance with the DVD-Video specification, content authored in accordance with the BD-ROM specification utilizing the HDMV framework can be parsed to create an object model. The Index Table can be parsed to identify each of the Movie Objects. The Movie Objects can then be used to insert objects corresponding to the Movie Playlists, Clips, and Button Objects into the object model utilizing the navigation information associated with the Movie Objects and the Button Objects. Once the object model has been constructed, the object model can be utilized to generate an HTML5 page for each Movie Object and an associated JavaScript file that captures the navigation information contained within Movie Objects and the Button Objects. In addition, audio/video/subtitle information in the clips associated with each Movie Object can be transcoded and inserted into one or more container files in a manner similar to that outlined above with respect to the extraction of audio/video/subtitle information from VOB files.

Insertion of Additional Features into EST Content

[0118] When interactive multimedia content authored for distribution via physical media is converted for electronic distribution in accordance with an embodiment of the invention, the conversion process is not limited to simply replicating the original interactive content, or preserving its original look and feel. For example, the playback client can enable text searching within the content using the subtitles to locate specific dialogue. A unique identifier or token can be generated for the interactive multimedia content and used to associate metadata with the interactive multimedia content and by third party applications to locate and retrieve the interactive multimedia content. The conversion process itself can contain additional processes that can generate and insert new, up to date content into the newly rendered package. In addition, metadata associated with the interactive multimedia content can be inserted into the converted content and/or links to metadata can be inserted into the multimedia content. In addition, digital rights management techniques can be used to technically protect the content for EST.

Discovery of EST Content

[0119] Generating a unique token identifying the multimedia content at the time it is converted from its original format can facilitate the identification of converted interactive multimedia content. The unique token can then be utilized to register the location of the interactive multimedia content and to enable modification of the metadata related to the content. Once registered, the unique token can be utilized by content guides and third party applications to identify the content for EST and to facilitate the retrieval of the content via a network. In many embodiments, individual content owners can generate interactive multimedia content for electronic distribution in accordance with embodiments of the invention and any resulting unique identifiers and/or tokens can be registered in a database containing a directory of locations in which the interactive multimedia content can be downloaded and metadata or links to metadata associated with the interactive multimedia content.

[0120] While the above description contains many specific embodiments of the invention, these should not be construed as limitations on the scope of the invention, but rather as an example of one embodiment thereof For example, embodiments of the invention are not limited to parsing interactive multimedia content authored in accordance with the DVD-Video specification or the generation of HTML5 pages from object models created using the original interactive content. Accordingly, the scope of the invention should be determined not by the embodiments illustrated, but by the appended claims and their equivalents.

What is claimed:

1. A method of electronically distributing interactive multimedia content authored for distribution via a physical medium, comprising:

building an object model of interactive multimedia content authored for distribution via a physical medium using a content authoring system;

automatically authoring a user interface based upon the object model using the content authoring system;

packing the multimedia content into at least one container file; and

electronically distributing at least a portion of the authored user interface and the at least one container file via a network connection.

2. The method of claim **1**, wherein the interactive multimedia content is authored in accordance with the DVD-Video specification.

3. The method of claim **1**, wherein the interactive multimedia content comprises a plurality of files including at least one IFO file containing tables describing objects within the interactive multimedia content and at least one VOB file containing multimedia content and navigation information.

4. The method of claim **3**, wherein building an object model of interactive multimedia content authored for distribution via a physical medium using a content authoring system comprises parsing the at least one IFO file and the at least one VOB file to build an object model for the interactive multimedia content using the content authoring system.

5. The method of claim **4**, wherein parsing the at least one IFO file and the at least one VOB file to build an object model for the interactive multimedia content comprises identifying